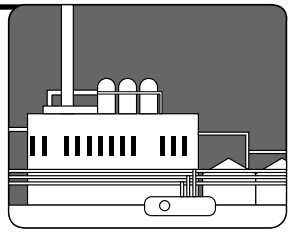


Chapter 2

TRI Reporting

WHAT IS THE TOXICS RELEASE INVENTORY?

The TRI is a publicly available database that contains specific toxic chemical release and transfer information from manufacturing facilities (including federal facilities as of 1994) throughout the United States. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), which Congress passed to promote planning for chemical emergencies and to provide information to the public about the presence and release of toxic chemicals in their communities.

Following passage of the Pollution Prevention Act of 1990, the TRI was expanded to include mandatory reporting of additional waste management and pollution prevention activities. The information collected under these laws can be used by the public to identify facilities and chemical release patterns that warrant further study and analysis. Combined with hazard and exposure information, TRI has proven to be a valuable tool for risk identification.

Each year, manufacturing facilities meeting certain thresholds must report their releases and transfers of listed toxic chemicals to EPA and to the state or tribal entity in whose jurisdiction the facility is located. The TRI list for 1995 included more than 600 chemicals and 28 chemical categories. Each facility must report its information on a form, known as Form R, provided by the EPA. A Form R report is required for each TRI chemical the facility has manufactured, processed, or otherwise used in amounts exceeding the thresholds for the 1995 reporting year. Starting with the 1995 reporting year, some facilities with lower levels of reportable amounts can file a much shorter certification form (Form A).❶

Reports for each calendar year are due by July 1 of the following year. After completion of data entry and data quality assurance activities, the Agency makes the data available to the public in printed reports, in a computer database, and through a variety of other information products such as CD-ROMs. States also make available to

❶ The annual reportable amount is defined as the total of all releases to the environment and other generated wastes containing the listed toxic chemical.

the public copies of the forms filed by facilities in their jurisdiction. In addition, some states independently produce a data release report.

WHO MUST REPORT?

Manufacturing facilities that have the equivalent of 10 or more full-time employees and meet the established thresholds for manufacturing, processing, or otherwise using listed chemicals must report their releases and transfers. Manufacturing facilities are defined as facilities in Standard Industrial Classification (SIC) primary codes 20-39, which include, among others: chemicals, petroleum refining, primary metals, fabricated metals, paper, plastics, and transportation equipment. Thresholds for manufacturing and processing are currently 25,000 pounds for each listed chemical, while the threshold for otherwise using is 10,000 pounds per chemical. Beginning with the 1995 reporting year, certain facilities were able to take advantage of an alternate, burden reducing reporting threshold (see Chapter 3 for additional details).

WHAT MUST BE REPORTED?

Each year, facilities report to TRI the amounts of toxic chemicals released to the air, water and land and injected underground, and the amounts of chemicals transferred off-site for disposal, treatment, energy recovery, and recycling. Facilities provide specific identifying information, such as:

- name
- location
- type of business
- contact names
- name of parent company
- environmental permit numbers.

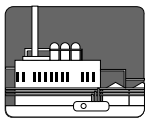
They also provide information about the manufacture, processing, and use of the listed chemical at the facility and the maximum amount of the chemical on-site during the year. Facilities provide information about methods used to treat waste at the site and the efficiencies of those treatment methods. In addition to information about the amount of toxic chemicals sent off-site, facilities also must specify the destination of these transfers.

Beginning with the 1991 reports, facilities were required to provide information about source reduction activities and about additional waste management activities such as recycling. Companies must provide a production index that can help relate changes in reported quantities of toxic chemicals in waste to changes in production. These additional data elements facilitate tracking of industry progress in reducing waste generation and moving towards safer management alternatives. While the current TRI data cannot provide an absolute measure of pollution prevention, the data can provide new insight into the complete toxics cycle.

WHAT ARE THE BENEFITS AND LIMITATIONS OF THE DATA?

Benefits

The TRI program has given the public unprecedented direct access to toxic chemical release, transfer, and other waste management data at the local, state, regional, and national level. Responsible use of this information can allow the public to identify potential concerns, gain a better understanding of potential risks, and work with industry and government to reduce toxic chemical releases and the risks associated with them. When combined with hazard and exposure data, this information can allow informed environmental priority setting at the local level.



Federal, state, and local governments can use the data to compare facilities or geographic areas to identify hotspots, to evaluate existing environmental programs, to more effectively set regulatory priorities, and to track pollution control and waste reduction progress. TRI data, in conjunction with demographic data, can help government agencies and the public identify potential environmental justice concerns.

Industry can use the data to obtain an overview of the releases and management of toxic chemicals, to identify and reduce costs associated with toxic chemicals in waste, to identify promising areas of pollution prevention, to establish reduction targets, and to measure and document progress toward reduction goals. The public availability of the data has prompted many facilities to work with their communities to develop effective strategies for reducing environmental and human health risks posed by toxic chemical releases.

The recent completion of Phase 1 TRI expansion has increased the usefulness of the data. The scope of the program was broadened to include 286 new chemicals and chemical categories on the list of reportable chemicals for a total of 647 chemicals. Many of these new chemicals are high production volume (HPV) chemicals and highly toxic substances.

Limitations

While the TRI provides the public, industry, and state and local governments an invaluable source of key environmental data, the TRI has some limitations which need to be considered when using the data. Currently, the program only applies to the manufacturing sector (although this will change with the implementation of Phase 2—Facility Expansion), a significant but limited sector of the industrial world handling toxic chemicals. Facilities with fewer than the equivalent of 10 full-time employees and facilities that do not meet the chemical thresholds are not required to submit TRI reports. Thus, while the TRI included more than 73,000 reports from approximately 22,000 facilities for 1995, it captures only a portion of all toxic chemical releases nationwide (approximately 2.2 billion pounds of total releases).

Another limitation of the existing TRI program is that the data currently collected provides limited data on the life cycle of chemicals used by facilities. Beyond reporting on chemical releases and waste management activities, only limited and very general information on chemical storage is provided and no information on the toxicity of chemicals is presented. In addition, the TRI does not account for toxic emissions from automobiles and many other non-industrial sources.

Furthermore, TRI requires the reporting of estimated data and does not mandate that facilities monitor their releases. Various estimation techniques are used when monitoring data are not available, and EPA has published estimation guidance for the regulated community. Variations between facilities can result from the use of different estimation methodologies. These factors should be taken into account when considering data accuracy.

As discussed above, the TRI data summarized in this report reflect chemical releases, transfers, and other waste management activities that occurred in the 1995 calendar year. Release and transfer patterns can change dramatically from one year to the next, so it is important to recognize that current facility activities may be different than those reported for 1995.

TRI reports reflect releases, transfers, and other waste management activities of chemicals, not exposures of the public to those chemicals. Release estimates alone are not sufficient to determine exposure or to calculate potential

adverse effects on human health and the environment. Although additional information is necessary to assess exposure and risk, TRI data can be used to identify areas of potential concern. Furthermore, the TRI data, in conjunction with other information, can be used as a starting point in evaluating exposures that may result from releases, transfers, and other waste management activities of toxic chemicals. The determination of potential risk depends upon many factors, including the toxicity of the chemical, the fate of the chemical after it is released, and the human or other populations that are exposed to the chemical after its release.

Toxicity of the Chemical: Some high-volume releases of less toxic chemicals may appear to be a more serious problem than lower-volume releases of highly toxic chemicals, when just the opposite may be true.

Exposure Considerations: The potential for exposure is greater the longer the chemical remains unchanged in the environment. Sunlight, heat, or microorganisms may or may not decompose the chemical.

For example, microorganisms readily degrade some chemicals, such as methanol, into less toxic chemicals; whereas metals are persistent and will not degrade upon release to the environment.

Medium: Chemical exposure of a population depends on the environmental medium to which a chemical is released. The medium also affects the types of exposures possible, such as inhalation, dermal exposure, or ingestion.

HOW CAN I OBTAIN ADDITIONAL TRI INFORMATION?

This report contains 1995 TRI data and limited comparison data for 1988, 1993 and 1994. A more detailed report will be issued in the Fall of 1997. This more comprehensive data release will analyze the TRI data by industry sector as well as provide some of the more detailed analyses presented in previous annual data release reports. The TRI data are available in an on-line computer database and in a variety of common computer and hard copy formats, to ensure that everyone can easily use the information. Information about accessing the TRI database is provided on the inside front cover of this report, as well as in Appendix B. The TRI User Support Service (202-260-1531) can provide assistance in accessing and using the TRI data.

To request copies of TRI and EPCRA documents or to obtain further information about the program, contact the toll-free Emergency Planning and Community Right-to-Know Information Hotline at 1-800-424-9346.

Other potential sources of TRI information include the state EPCRA section 313 contact, the EPA Regional Office, or the facility itself. Information about EPA Regional and state EPCRA section 313 contacts is found in Appendix A.